

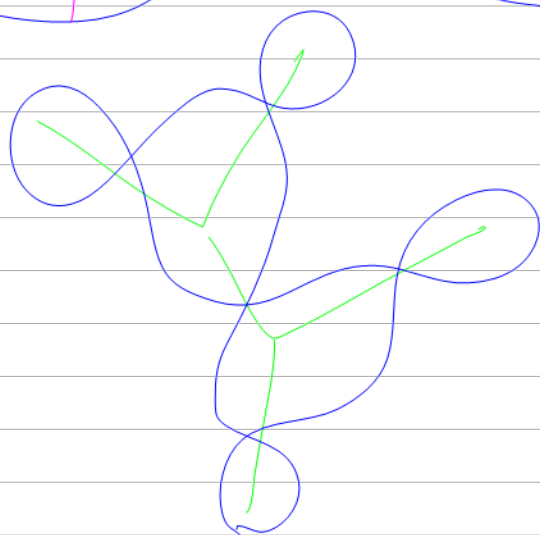
$$K \text{ } n \text{ crossings} \quad J(K) = \sum V_j z^j$$

$$V_j(K) = 0 \quad \forall j \leq n$$

$$\Rightarrow K = 0 \quad \nearrow \nearrow \quad \searrow \searrow \quad (=)$$

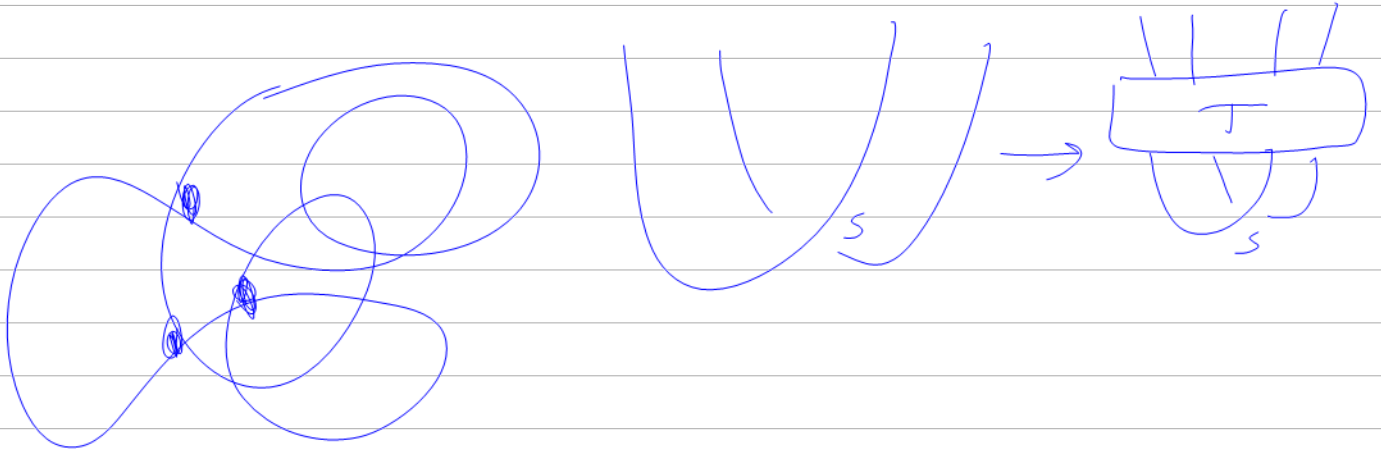
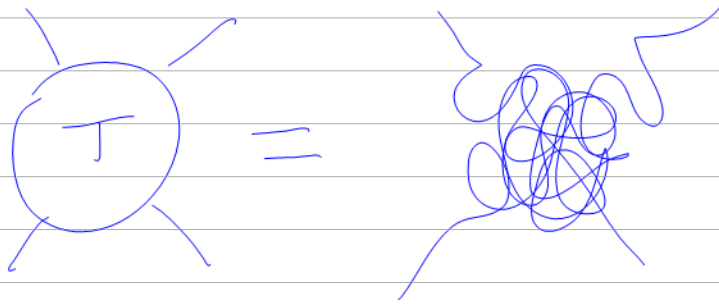
$$V_2 \left( \text{circle with two crossings} \right) \sim V_2 \left( \text{circle with two diagonals} \right)$$

$$\text{circle with two diagonals} \rightarrow \text{circle with two diagonals} - 2 \text{ circle with two diagonals}$$



$$J(K) = 0 \quad n \text{ crossings} \quad \leadsto \quad J(K_S) = \sum_{k \geq n} V_k z^k$$

$\searrow \rightarrow \text{circle with a dot}$ 
 $5n^2 \text{ crossings}$   
 $S \subset \text{ crossings of } K$



Given a knot  $K$  with  $J(K)=0$   
 we construct a knot  $K'$  (a family  
 $K_s$ ) by applying the transform  
 $K' \rightarrow$  . The family

$K_s$  has the properties

1.  $J(K_s) = J(K)$
2.  $K_s$  is non-trivial

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